

Research Memorandum 70-5



ANALYSIS OF OFFICER PERFORMANCE OF AN EXPERIMENTAL TASK: OFFICE MANAGEMENT

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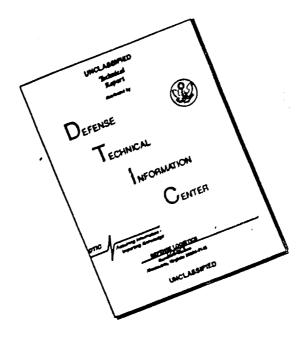
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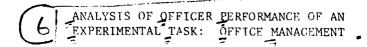
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Louis P. Willemin, Task Leader

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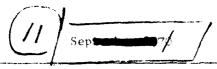
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ANALYSIS OF OFFICER PERFORMANCE OF AN EXPERIMENTAL TASK: OFFICE MANAGEMENT

A comprehensive longitudinal research program to improve initial assignment of officers was undertaken by BESRL at the recommendation of the Army Scientific Advisory Panel and the Office of the Deputy Chief of Staff for Personnel. The research was designed to provide instruments and techniques for differential classification of officers into three broad job domains: combat, technical, and administrative.

Within the broad research program, a sample of 4000 officers was administered a battery of experimental measures -- the Differential Officer Battery (DOB) -- on entry to active duty in 1962 and 1963. A subsample of 900, representative of nine branches of service, was selected to participate in a special three-day situational exercise after they had served 12 to 18 months on active duty. The exercise was conducted from 1963 through early 1965 at the Officer Evaluation Center (OEC) at Fort McClellan, Alabama. Each officer was required to perform 15 tasks typical of junior officer duties -- five combat, five technical, and five administrative in nature. The tasks were assigned in the context of a simulated Military Assistance Advisory Group (MAAG) operating in a friendly country. A simulated invasion required emergency response under field conditions of simulated combat and guerrilla activity. The situation provided considerable stress and pressure on the officer subjects who were permitted little sleep during the exercise. An OEC staff of 17 officers and 41 enlisted men conducted the exercise, functioning as actors, observers, and recorders of performance. Their recordings and evaluations, along with any products required of the officer subjects, were analyzed to yield dimensions of performance measures in each task. The present publication covers the analysis of data from one of the administrative tasks conducted early in the exercise, the Office Management task.

OBJECTIVES

The primary objective of the present analysis was to discover the dimensions of behavior measured in the Office Management task. Scores developed in this analysis are to be correlated with scores from the other 14 tasks to indicate which dimensions are task specific, which are common to the administrative domain, and which are general across all performance domains. The scores will serve also as criteria for validation of predictor scores from the DOB. Findings from the overall research program can be applied to evaluation of junior officer performance, to initial classification of officers, and to the problem of early identification and career follow-up of the most promising potential leaders.

PROCEDURE

THE SITUATIONAL TASK

The Office Management task was designed to measure the officer's ability to analyze assignment of duties, working arrangements, personnel records procedures, organization and flow charts, and to apply management principles in correcting improper office procedures. Specifically, the officer was instructed to recommend changes in the organization chart and flow process chart of the personnel office of a host nation unit. He was required to realign sections, reallocate personnel, revise administrative routines, and diagnose deficiencies in the office operation.

SAMPLE

For the internal analysis reported here, only the last 733 officers of the 900 examined in the OEC were included in the sample. Data on officers who went through the exercise earlier were excluded because of changes and additions in recording and evaluating procedures introduced in the early operation of the Center.

VARTABLES

Performance variables were obtained from three instruments: Organization Chart Checklist, Flow Process Chart Checklist, and Deficiency Checklist. These instruments contained 29, 31, and 36 items, respectively. The Deficiency Checklist consisted of 18 pairs of items, one set in the checklist of deficiencies reported, the other in the examinee's markings on the field notes.

ANALYSIS

The three instruments were divided into a total of seven sections according to content. The sections were subdivided into parallel sets of items so that reliability of each section could be estimated. Table 1 shows the resultant set of scales. The full-length scales and the total scores on each of the three instruments were then intercorrelated. From the 10-variable matrix, a set of final variables representing differentiable aspects of performance and a total score on the task were determined by inspection.

RESULTS

Table 2 presents reliability estimates for each of the seven content scales based on the Spearman-Brown correction of the split-half reliability coefficients (Table 5). All scales except Changes and Deletions show adequate reliability, ranging from .71 to .91. Table 3 presents the

correlation among the scales and total score on each instrument. The high coefficient (.84) between Reported Deficiencies and Identification on Notes indicated that a single Deficiency score would suffice.

Accordingly, the nine content scale scores selected for correlation with scores on other tasks and validation of the DOB were: Identifying Functions, Allocating Manpower, Total Organization Chart Checklist score, Sequence of Operations, Changes and Deletions, Retained Aspects, Total Flow Process Chart Checklist Score, a single Deficiency Checklist Score, and Total Task Score. Total score for the task was made up of the unweighted sum of all the scale scores. Means and standard deviations of the selected scales and instrument scores are shown in Table 4, intercorrelation in Table 5. The Flow Process Chart and the Deficiency Checklists receive slightly less than two-fifths of the weight in the total score, and the Organization Chart Checklist slightly more than one-fifth.

The scale scores and total score derived from the analysis will be used for correlation with similarly derived scores from the other 14 situational tasks of the OEC exercise, and for validation of the predictors of the DOB.

Table !

CONTENT SCORES OBTAINED ON OFFICE MANAGEMENT TASK

Instrument	Content Score	No. of Items
Organization Chart Checklist	Identifying Functions:	
	(Λ)	5 £
	(B)	î.
	Allocation of Manpower:	
	(A)	Q
	(B)	10
Flow Process Chart Checklist	Sequence of Operations	
	(<u>A</u>)	3 2
	(B)	2
	Changes and Deletions:	
	(A)	4
	(B)	2
	Retained Aspects:	
	(A)	10
	(B)	10
Deficiency Checklist	Reported Deficiencies:	
•	'A)	r ,
	(B)	5 5 4
	(c)	
	(D)	4.
	Identification on Notes:	
	(A)	5
	(B)	5 4
	(c)	4
	(D)	4

Table 2

RELIABILITY OF CONTENT CATEGORY SCALES (CORRECTED)

Instrument	Reliability Coefficients
Organization Chart Checklist	
Identifying Functions Allocating Manpower	.71 .82
Flow Process Chart Checklist	
Sequence of Operations	.82
Changes and Deletions	.21
Retained Aspects	.91
Deficiency Checklist	
Reported Deficiencies	.78
Identification on Notes	.72

Table 3

INTERCORRELATIONS® OF CONTENT CATEGORY SCALES

<u></u>	Scales			In	terc	orre	lati	ons		<u> </u>	
1.	Identifying Functions	1									
2.	Allocating Manpower	15	2								
3.	Organization Chart Total	4 9 b	94 ^b	3							
4.	Sequence of Operations	- 03	09	00	4						
5.	Changes and Deletions	00	12	11	3 8	5					
6.	Retained Aspects	01	05	05	63	40	<u>6</u>				
7.	Flow Process Chart Total	01	08	08	75 ^b	62 b	95 ^b	7			
8.	Reported Deficiencies	-04	18	14	09	13	06	09	<u>8</u>		
۹.	Identification on Notes	- 02	13	11	12	16	08	12	84	2	
10.	Deficiency Checklist Total	03	16	13	11	15	07	11	96 ^b	96 ^b	<u>10</u>

^{*}Decimal points omitted

^b Part-whole correlation coefficients

Table 4

MEANS AND STANDARD DEVIATIONS ON SELECTED SCALES
OF THE OFFICE MANAGEMENT TASK

Scales	М	SD
Identifying Functions Allocating Manpower	6.36 12. 4 8	1.37 3.37
Organization Chart Total	18.84	3.82
Sequence of Operations Changes and Deletions Retained Aspects	2.36 4.25 13.56	1.45 1.72 5.02
Flow Process Chart Total	20.17	6.94
Deficiency Checklist Total	23.70	7.44
Total Task Score	62.71	11.37

		占	Organization Chart	1 on C	art	~'	low P	Flow Process Chart	Chart			Defic	tency	Deficiency Checklis		· 	
-			1			ć		į			Reported		Reported Correct			بد نیا	
Checklist	Variable		runcelons O E		Manpower O E	Sequence 0 E		Changes 0 E	Aspec 0			O G	Opns O E	0 0	Opns Opns	E	S.D.
Organization Chart	Identifying Functions C	o o														3.56	.80
		E° 55°	U													2.80	9/.
	Allocating Manpower 0	16	07													5.22	1.85
	ω	23	70	ь69												7.26	1.82
Flow Process Chart	Sequence of Operations O	- 02	-01	07	90											1.47	.87
	ы	05	-01	90	10	48 ₄										-88	-82
	Changes and Deletions 0	05	-05	05	0.5	01	11									1.13	.9
	Ð	8	01	12	11	31	33	12 ^d								3.12	1.36
	Retained Aspects 0	8	-05	00	05	63	39	18 35								07.9	2.59
	(E)	- 03	01	03	80	24	20	21 37	834							7.16	2.65
Deficiency Checklist	Reported Deficiencies 0	05	90-	14	14	70	12 -	-05 15	01 07							3.48	1.39
	ω.		-08	12	14	05	03	-01 12	-62 0	05 674	-					3.59	1.48
	Reported Correct Opns 0	- 0	90-	15	11	90	10	02 12	05 07	7 40	45	٠,				3.10	1.06
	ba)	9	90-	12	13	10	11	08 10	06 07	7 42	38	3 514	•			2.86	1.07
	Identified Deficiencies 0	05	90-	05	0.5	07	17	05 14	03 1	11 64	77	4 22	32			2.21	1.38
	EC .	- 0	-07	60	2	02	60	03 13	02 07	7 51	89	30	32	_{\$69}		2.63	1.61
	Identified Correct Opns O	- 05	-06	16	12	90	8	03 12	05 07	7 40	45	5 99	51	22 30		3.10	1.05
	B	8	-06	11	12	10	11	08 10	06 07	7 42	38	8 51	66	32 32	514	2.85	1.08
										1							

Decimal points omitted

0 = odd

E = even

Basis for reliability computation